REMARKS

The Official Action mailed October 23, 2003, has been received and its contents carefully noted. This response is filed within three months of the mailing date of the Official Action and therefore is believed to be timely without extension of time. Accordingly, the Applicants respectfully submit that this response is being timely filed.

The Applicants note with appreciation the consideration of the Information Disclosure Statements filed on April 17, 2000, June 14, 2000, September 7, 2000, October 16, 2000, December 1, 2000, September 20, 2001, and February 28, 2002.

Claims 1-12, 14, 15, 18 and 20-29 were pending in the present application prior to the above amendment. Claims 3, 6, 8, 10 and 15 have been canceled, and claims 20-27 have been amended to correct claim dependency and a minor typographical error. Accordingly, claims 1, 2, 4, 5, 7, 9, 11, 12, 14, 18 and 20-29 are now pending in the present application, of which claims 1, 2, 4, 14, 28 and 29 are independent. For the reasons set forth in detail below, all claims are believed to be in condition for allowance. Favorable reconsideration is requested.

Paragraph 1 of the Official Action rejects claims 3 and 15 under 35 U.S.C. § 112, first paragraph. In response, claims 3 and 15 have been canceled; therefore, the rejections are moot.

Paragraph 3 of the Official Action rejects claims 1, 5, 7, 9, 14, 18 and 20-29 as obvious based on the combination of U.S. Patent No. 5,706,064 to Fukunaga et al., U.S. Patent No. 5,536,950 to Liu et al. and U.S. Patent No. 6,400,428 to Izumi. The Applicants respectfully traverse the rejection because the Official Action has not made a *prima facie* case of obviousness.

As stated in MPEP §§ 2142-2143.01, to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the

prior art reference (or references when combined) must teach or suggest all the claim limitations. Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art. "The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art." In re Kotzab, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000). See also In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); In re Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

Also, MPEP § 2142 states that the examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness. It is respectfully submitted that the Official Action has failed to carry this burden. While the Official Action relies on various teachings of the cited prior art to disclose aspects of the claimed invention and asserts that these aspects could be used together, it is submitted that the Official Action does not adequately set forth why one of skill in the art would combine the references to achieve the present invention.

The Official Action implicitly concedes that Fukunaga and Liu do not teach that pixel electrode 412 is light reflective (pages 5 and 8, Paper No. 21). The Official Action relies on a new reference, Izumi, to allegedly teach using either a transparent electrically conductive film or a reflective electrically conductive film with Fukunaga. Specifically, the Official Action asserts that "it also would have been obvious to form Fukunaga's pixel electrode being either a transparent electrically conductive film or a reflective electrically conductive film depending upon the display device type which is desired for the liquid crystal display device, as taught by Izumi (column 6, lines 15-20)" (page 5, Paper No. 21). In other words, the Official Action appears to assert that it would have been obvious to modify or replace Fukunaga's pixel electrode 412 with

Izumi's pixel electrode 15. For the reasons stated in detail below, the Applicants respectfully disagree and traverse the above assertions in the Official Action.

The Official Action has not given any indication that one with ordinary skill in the art at the time of the invention would have had a reasonable expectation of success when combining Fukunaga, Liu and Izumi. Fukunaga discloses that "the R-, G-, B-colored portions 413 and the black matrix portion 414 become glass which has an insulating property" (column 26, lines 30-33). The Applicants respectfully submit that if the reflective conductive film of Izumi is applied to Fukunaga's display device, as suggested by the Official Action, then the R-, G-, B-colored portions could not be used as color filters. In other words, even if Fukunaga is combined with Liu and Izumi as suggested by the Official Action, since Fukunaga's device is required to be transmissive in order to allow the light to enter into the color filters, the resulting hypothetical combined structure of Fukunaga and Izumi could not function as a liquid crystal display device. In other words, nothing in Izumi teaches or suggests changing Fukunaga from a transmissive-type LCD to a reflective-type LCD. Therefore, the Applicants believe this rejection should be traversed.

Furthermore, there is no suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify Fukunaga, Liu and Izumi or to combine reference teachings to achieve the claimed invention. It is noted that no specific motivation is cited to support the alleged combination of Fukunaga and Izumi. Rather, it is merely asserted that it would have been obvious to combine Fukunaga and Izumi. Specifically, as explained in detail above, it is not clear why one of ordinary skill in the art would have been motivated to combine or replace Fukunaga's pixel electrode 412 with Izumi's pixel electrode 15.

Liu does not cure the deficiencies in the alleged motivation to combine Fukunaga and Izumi. The Official Action relies on Liu to allegedly teach "the steps of depositing the embedded conductive layer 82 in the opening [of Fukunaga], followed by planarization to expose the surface of the insulating layer 78 and depositing and

patterning the pixel electrode 24 on the embedded conductive layer 82" (page 4, Id.). Liu does not show that one of ordinary skill in the art would have been motivated to combine Fukunaga and Izumi.

The Applicants further contend that even assuming, *arguendo*, that the combination of Fukunaga, Liu and Izumi is proper, there is a lack of suggestion as to why a skilled artisan would use the proposed modifications to achieve the unobvious advantages first recognized by the Applicants. The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination.

In the present application, it is respectfully submitted that the prior art of record, alone or in combination, does not expressly or impliedly suggest the claimed invention and the Official Action has not presented a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references.

For the reasons stated above, the Official Action has not formed a proper *prima facie* case of obviousness. Accordingly, reconsideration and withdrawal of the rejections under 35 U.S.C. § 103(a) are in order and respectfully requested.

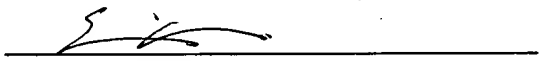
Paragraph 4 of the Official Action rejects claims 3, 6, 8, 10, and 20-26 as obvious based on the combination of Fukunaga and U.S. Patent 5,990,542 to Yamazaki. Paragraph 5 of the Official Action rejects claim 15 as obvious based on the combination of Fukunaga, Yamazaki, and U.S. Patent 6,043,149 to Jun. In response, claims 3, 6, 8, 10 and 15 have been canceled and claims 20-26 have been amended to depend from claims 1, 2, 4 or 14; therefore, the rejections are moot.

Paragraph 6 of the Official Action rejects claims 2 and 11 as obvious based on the combination of Fukunaga, Liu, Izumi, and U.S. Patent 6,221,140 to Kobayashi et al. Paragraph 7 of the Official Action rejects claims 4 and 12 as obvious based on the combination of Fukunaga, Izumi, Jun and Kobayashi. Kobayashi and Jun do not cure the deficiencies in the alleged motivation to combine Fukunaga and Izumi. The Official

Action relies on Kobayashi to allegedly teach forming an oxide conductive layer by a spin coating method to cover a substrate and an opening (page 7, Id.) and on Jun to allegedly teach etching an embedded conductive layer using a second conductive layer as a mask in a self-alignment manner (page 8, Id.). Kobayashi and Jun do not show that one of ordinary skill in the art would have been motivated to combine Fukunaga and Izumi. Therefore, the Official Action has not formed a proper *prima facie* case of obviousness. Accordingly, reconsideration and withdrawal of the rejections under 35 U.S.C. § 103(a) are in order and respectfully requested.

Should the Examiner believe that anything further would be desirable to place this application in better condition for allowance, the Examiner is invited to contact the Applicants' undersigned attorney at the telephone number listed below.

Respectfully submitted,



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